

IN THE CLAIMS

cl 1. (previously presented) A wayside rail lubrication apparatus for applying lubrication for the passage of trains having one or more locomotives constituting a consist pulling a plurality of load cars along the rails, the apparatus comprising:

a sensor associated with a first position along a rail for producing a lubrication signal when a locomotive pulling a plurality of load cars moves adjacent the first position; and

a lubricant dispensing apparatus for applying a lubricant at a second position along the rail in response to the lubrication signal, the lubricant adapted to reduce the friction between wheels of the load cars and the rail, the first position and the second position being separated by a distance along the rail with the first position being farther along the rail in a direction of movement of the locomotive relative to the second position, the distance being sufficient to prevent the lubricant from contacting any drive wheel of the locomotive consist, whereby friction at the rail is reduced for the load cars of the train without loss of tractive effort of the locomotive consist on the rails.

2. (previously presented) The wayside rail lubrication apparatus of claim 1, the lubricant dispensing apparatus further comprising:

a lubricant container for storing a volume of lubricant;

a pump for delivering lubricant from the lubricant container to an applicator along the rail; and

a refilling device for adding lubricant to the lubricant container at no more than a predetermined rate so that lubricant available for application over a predetermined period of time is limited.

3. (original) The wayside rail lubrication apparatus of claim 1, further comprising a bypass device for selectively preventing the lubricant dispensing apparatus from applying the lubricant in response to the lubrication signal.

4. (previously presented) The wayside rail lubrication apparatus of claim 1, further comprising a controller terminating the application of the lubricant by the lubricant dispensing apparatus before a number of the load cars at a rear of the train pass the second position.

Claims 5 and 6 (cancelled).

7. (previously presented) A wayside rail lubrication apparatus for lubricating rails for the passage of trains along the rails, the apparatus comprising:

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cont* a detection apparatus for providing a lubrication signal in response to the presence of a train on a rail adjacent the detection apparatus;

a lubricant dispensing apparatus for applying a lubricant in response to the lubrication signal to reduce friction of the train on the rails; and

a bypass device for selectively preventing operation of the lubricant dispensing apparatus in applying the lubricant in response to the lubrication signal under circumstances in which the addition of lubricant is undesirable;

wherein the bypass device comprises a wireless communication system receiver for receiving a signal from a wireless communication system transmitter located on the train for controlling the bypass device.

Claims 8-16 (cancelled).

17. (previously presented) A method of applying lubricant for the passage of a succession of trains along a rail, the method comprising:

applying lubricant at a first time in response to the presence of a first train at a location along the rail;

sensing the presence of a second train at the location at a second time; and

applying lubricant in response to the presence of the second train at the location, with the quantity of lubricant applied at the second time being responsive to the time span between said first and second times.

18. (previously presented) The method of claim 17, further comprising applying no lubricant at the second time if the time span has not exceeded a predetermined minimum.

19. (previously presented) A method of applying lubricant for the passage of trains each having one or more locomotives constituting a consist, the consist located at a head of train at a leading end of the train, and an end of train at a trailing end of the train as the train travels along the rail, the method comprising:

sensing the presence of a train on a rail;

applying a lubricant at a section of the rail in response to the presence of the train after the consist at the head of the train has passed the section of rail;

determining an end of train location relative to the section of rail; and

terminating the application of lubricant at the section of rail before the end of the train passes the section of rail so that the quantity of lubricant on the section of rail is dissipated by wheels of a plurality of cars proximate the end of the train.

20. (original) The method of claim 19, further comprising:

detecting the end of the train proximate a position of the rail a predetermined distance from a position of a lubricant applicator; and

terminating application of the lubricant by the lubricant applicator in response to the detection of the end of the train.

21. (new) A wayside rail lubrication apparatus comprising:

a detection apparatus generating a lubrication signal in response to the presence of a train on a rail;

a lubricant dispensing apparatus applying lubricant to the rail in response to the lubrication signal; and

a timing apparatus producing a timed delay between the generation of the lubrication signal and the application of the lubricant.

22. (new) The apparatus of claim 21, further comprising a train speed input to the timing apparatus for making the timed delay responsive to a speed of the train.

23. (new) The apparatus of claim 21, further comprising a locomotive parameter input to the timing apparatus for making the timed delay responsive to one of the group of a size of a locomotive and a number of locomotives.

24. (new) A wayside rail lubrication apparatus comprising:
a lubricant dispensing apparatus disposed along a rail for applying lubricant to the rail;

a transmitter located remote from the lubricant dispensing apparatus for transmitting a control signal; and

a receiver cooperatively associated with the lubricant dispensing apparatus for controlling an operation of the lubricant dispensing apparatus in response to the control signal.

25. (new) The apparatus of claim 24, wherein the transmitter and the receiver comprise a wireless communications system.

26. (new) The apparatus of claim 24, wherein the control signal comprises a bypass signal for preventing an operation of the lubricant dispensing apparatus.

27. (new) The apparatus of claim 24, wherein the transmitter is disposed on a vehicle on the rail.